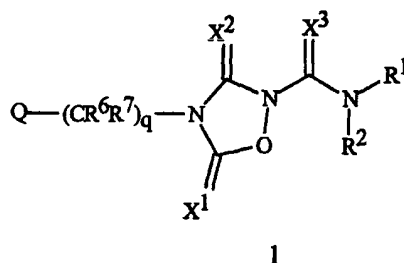


CLAIMS

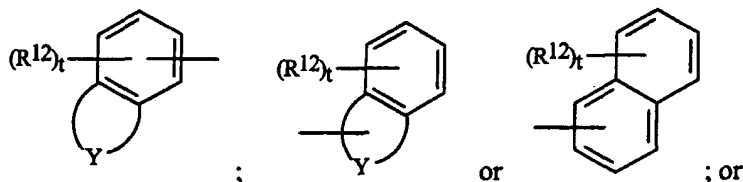
What is claimed is:

1. A compound selected from Formula 1, an *N*-oxide or an agriculturally suitable salt thereof,



wherein

- Q is H; or C<sub>1</sub>-C<sub>12</sub> alkyl, C<sub>3</sub>-C<sub>10</sub> cycloalkyl, C<sub>6</sub>-C<sub>14</sub> bicycloalkyl, C<sub>3</sub>-C<sub>12</sub> alkenyl, C<sub>3</sub>-C<sub>10</sub> cycloalkenyl, C<sub>6</sub>-C<sub>14</sub> bicycloalkenyl or C<sub>3</sub>-C<sub>12</sub> alkynyl, each optionally substituted with one or more R<sup>21</sup>; or
- Q is a 3- to 7-membered fully saturated or 5- to 7-membered partially saturated heterocyclic ring containing one or two X, provided that (a) when X is other than O or S(O)<sub>n</sub>, then only one X may be present and (b) when two X are present in the ring, they cannot be bonded directly to each other; or
- Q is a 5- or 6-membered aromatic heterocyclic ring system containing 1 to 3 heteroatoms independently selected from the group consisting of nitrogen, oxygen and sulfur, provided that the heterocyclic ring system contains no more than one oxygen and no more than one sulfur, and each heterocyclic ring system is optionally substituted with one or more R<sup>16</sup>; and when Q is a 5- or 6-membered aromatic heterocyclic ring system containing a nitrogen, then Q is bonded through any available carbon or nitrogen atom by replacement of a hydrogen on said carbon or nitrogen atom; or
- Q is phenyl optionally substituted with one or more substituents independently selected from the group consisting of R<sup>16</sup>, phenoxy and Z; or
- Q is



373

Q is  $-C(R^{14})(=NOR^{15})$ ,  $-C(O)R^{19}$ ,  $-C(O)OR^{19}$ ,  $-C(O)SR^{19}$ ,  $-C(S)R^{19}$ ,  $-C(S)OR^{19}$ ,  $-C(S)SR^{19}$ ,  $-C(O)NR^{23}R^{24}$ ,  $-C(S)NR^{23}R^{24}$ ,  $-OR^{19}$ ,  $-NR^{19}R^{20}$ ,  $-S(O)_nR^{19}$  or  $-S(O)_nNR^{19}R^{20}$ ;

each X is  $-O-$ ,  $-S(O)_n-$ ,  $-N=$ ,  $-NR^{10}-$  or  $-Si(R^{11})_2-$ ;

5 Y is, together with the carbons to which it is attached, a fully or partially saturated 5-, 6- or 7-membered carbocyclic ring optionally substituted with one or more  $C_1$ - $C_4$  alkyl groups; or

Y is, together with the carbons to which it is attached, a fully or partially saturated 5-, 6- or 7-membered heterocyclic ring which contains one or two X and is  
10 optionally substituted with one or more  $R^{12}$ , provided that when said heterocyclic ring contains two X, then one X is other than O;

Z is phenyl or a 5- or 6-membered aromatic heterocyclic ring system containing 1 to 3 heteroatoms independently selected from the group consisting of nitrogen, oxygen and sulfur, provided that the heterocyclic ring system contains no more  
15 than one oxygen and no more than one sulfur, and each phenyl and heterocyclic ring system is optionally substituted with one or more  $R^{16}$ ;

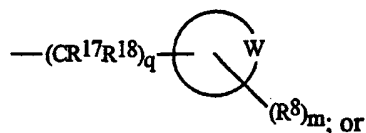
$R^1$  is  $C_1$ - $C_6$  alkyl,  $C_1$ - $C_6$  haloalkyl,  $C_3$ - $C_6$  alkenyl,  $C_3$ - $C_6$  haloalkenyl,  $C_3$ - $C_6$  alkynyl,  $C_3$ - $C_6$  haloalkynyl,  $C_1$ - $C_6$  alkoxy,  $C_2$ - $C_6$  alkoxyalkyl or  $C_2$ - $C_6$  haloalkoxyalkyl;  
20 or  $R^1$  is  $C_3$ - $C_7$  cycloalkyl or  $C_3$ - $C_7$  cycloalkenyl, each optionally substituted with one or more  $R^5$ ; or

$R^1$  is phenyl optionally substituted with one or more  $R^{13}$ ; or

$R^1$  is a 5- or 6-membered aromatic heterocyclic ring system containing 1 to 3 heteroatoms independently selected from the group consisting of nitrogen, oxygen and sulfur, provided that the heterocyclic ring system contains no more  
25 than one oxygen and no more than one sulfur, and each heterocyclic ring system is optionally substituted with one or more  $R^{16}$ ;

$R^2$  is  $C_1$ - $C_6$  alkyl,  $C_1$ - $C_6$  haloalkyl,  $C_3$ - $C_7$  cycloalkyl,  $C_3$ - $C_6$  alkenyl,  $C_3$ - $C_6$  haloalkenyl,  $C_3$ - $C_6$  alkynyl,  $C_3$ - $C_6$  haloalkynyl,  $C_1$ - $C_6$  alkoxy,  $C_2$ - $C_6$  alkoxyalkyl,  $C_2$ - $C_6$  haloalkoxyalkyl or  $NR^3R^4$ ; or

30  $R^2$  is



$R^1$  and  $R^2$  are taken together as  $-\text{CH}_2\text{CH}_2-$ ,  $-\text{CH}_2\text{CH}_2\text{CH}_2-$ ,  $-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2-$ ,  $-\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2\text{CH}_2-$  or  $-\text{CH}_2\text{CH}_2\text{OCH}_2\text{CH}_2-$ ;

- R<sup>3</sup> is C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> haloalkyl, C<sub>3</sub>-C<sub>6</sub> alkenyl, C<sub>3</sub>-C<sub>6</sub> haloalkenyl, C<sub>3</sub>-C<sub>6</sub> alkynyl, C<sub>3</sub>-C<sub>6</sub> haloalkynyl; or
- R<sup>3</sup> is C<sub>3</sub>-C<sub>7</sub> cycloalkyl or C<sub>3</sub>-C<sub>7</sub> cycloalkenyl, each optionally substituted with one or more R<sup>5</sup>; or
- 5 R<sup>3</sup> is a saturated or partially saturated 5-, 6- or 7-membered heterocyclic ring containing 1 to 2 heteroatoms independently selected from the group consisting of nitrogen, oxygen and sulfur, and each heterocyclic ring is optionally substituted with one or more R<sup>5</sup>; or
- R<sup>3</sup> is phenyl optionally substituted with one or more R<sup>26</sup> groups; or
- 10 R<sup>1</sup> and R<sup>3</sup> are taken together with the two nitrogen atoms to which they are attached to form a saturated or partially saturated 5-, 6- or 7-membered heterocyclic ring containing an optional third heteroatom selected from the group consisting of oxygen, sulfur and nitrogen, and said heterocyclic ring is optionally substituted with one or more R<sup>9</sup>; or
- 15 R<sup>2</sup> and R<sup>13</sup>, together with the two atoms to which they are attached and the atom between them, form a fully saturated 5-, 6- or 7-membered carbocyclic or heterocyclic ring containing one oxygen, one sulfur or one or two nitrogen atoms, said heterocyclic ring is optionally substituted with one or more R<sup>12</sup>, provided that when said heterocyclic ring contains two nitrogen atoms, they are
- 20 other than bonded directly to each other;
- R<sup>4</sup> is H or C<sub>1</sub>-C<sub>4</sub> alkyl; or
- R<sup>3</sup> and R<sup>4</sup> are taken together with the nitrogen atom to which they are attached to form a saturated or partially saturated 5-, 6- or 7-membered heterocyclic ring containing an optional second heteroatom selected from the group consisting of
- 25 oxygen, sulfur and nitrogen, and said heterocyclic ring is optionally substituted with 1-4 R<sup>9</sup>;
- each R<sup>5</sup> is independently halogen, C<sub>1</sub>-C<sub>4</sub> alkyl or C<sub>1</sub>-C<sub>4</sub> alkoxy; or when two R<sup>5</sup> are attached to the same carbon, then said two R<sup>5</sup> groups are taken together as (=O);
- each R<sup>6</sup> and R<sup>7</sup> are independently H or C<sub>1</sub>-C<sub>4</sub> alkyl;
- 30 R<sup>8</sup> is independently C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl or C<sub>1</sub>-C<sub>4</sub> alkoxy;
- each R<sup>9</sup> is independently C<sub>1</sub>-C<sub>4</sub> alkyl or C<sub>1</sub>-C<sub>4</sub> alkoxy; or when two R<sup>9</sup> are attached to the same carbon, then said two R<sup>9</sup> groups are taken together as (=O);
- W is, together with the carbons to which it is attached, a fully or partially saturated 5-, 6- or 7-membered heterocyclic ring containing one or two X, provided that (a)
- 35 when X is other than O or S(O)<sub>n</sub>, then only one X may be present; (b) when two

- X are present in the ring, they cannot be bonded directly to each other; and (c) said heterocyclic ring is bonded to the group  $(CR^{17}R^{18})_q$  through other than X;  $R^{10}$  is H, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>3</sub>-C<sub>4</sub> alkenyl, C<sub>3</sub>-C<sub>4</sub> alkynyl, C<sub>2</sub>-C<sub>4</sub> alkoxy carbonyl or C<sub>2</sub>-C<sub>4</sub> alkyl carbonyl; or  $R^{10}$  is phenyl optionally substituted with C<sub>1</sub>-C<sub>3</sub> alkyl, halogen, cyano, nitro or C<sub>2</sub>-C<sub>4</sub> alkoxy carbonyl;
- 5 each  $R^{11}$  is C<sub>1</sub>-C<sub>4</sub> alkyl;
- each  $R^{12}$  is independently halogen, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>1</sub>-C<sub>4</sub> alkoxy, C<sub>1</sub>-C<sub>4</sub> haloalkoxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> haloalkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl or C<sub>2</sub>-C<sub>4</sub> alkoxy carbonyl;
- 10 each  $R^{13}$  is independently halogen, C<sub>1</sub>-C<sub>3</sub> alkyl, C<sub>1</sub>-C<sub>3</sub> haloalkyl, C<sub>1</sub>-C<sub>3</sub> alkoxy, C<sub>1</sub>-C<sub>3</sub> haloalkoxy, C<sub>3</sub>-C<sub>6</sub> alkenyloxy, C<sub>3</sub>-C<sub>6</sub> alkynyloxy, C<sub>1</sub>-C<sub>4</sub> alkylthio, C<sub>1</sub>-C<sub>4</sub> haloalkylthio, C<sub>1</sub>-C<sub>4</sub> alkylsulfinyl, C<sub>1</sub>-C<sub>4</sub> alkylsulfonyl, cyano, amino, nitro or C<sub>2</sub>-C<sub>4</sub> alkoxy carbonyl;
- $R^{14}$  is H, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> haloalkyl or C<sub>2</sub>-C<sub>6</sub> alkoxyalkyl; or
- 15  $R^{14}$  and  $R^6$ , together with the carbon atoms to which they are bonded, form a 5- or 6-membered saturated carbocyclic ring optionally substituted with one or more C<sub>1</sub>-C<sub>4</sub> alkyl groups;
- $R^{15}$  is H, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>1</sub>-C<sub>6</sub> haloalkyl, C<sub>3</sub>-C<sub>4</sub> alkenyl or C<sub>3</sub>-C<sub>4</sub> alkynyl;
- each  $R^{16}$  is independently halogen, nitro, cyano, C<sub>1</sub>-C<sub>4</sub> alkyl, C<sub>1</sub>-C<sub>4</sub> haloalkyl, C<sub>3</sub>-C<sub>4</sub> alkenyl, C<sub>3</sub>-C<sub>4</sub> alkynyl, OR<sup>22</sup>, NR<sup>23</sup>R<sup>24</sup> or S(O)<sub>n</sub>R<sup>19</sup>;
- 20 each  $R^{17}$  and  $R^{18}$  are independently H or C<sub>1</sub>-C<sub>4</sub> alkyl;
- each  $R^{19}$  and  $R^{20}$  are independently C<sub>1</sub>-C<sub>12</sub> alkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, C<sub>3</sub>-C<sub>12</sub> alkenyl, C<sub>3</sub>-C<sub>8</sub> cycloalkenyl or C<sub>3</sub>-C<sub>12</sub> alkynyl, each optionally substituted with one or more R<sup>21</sup>;
- 25 each  $R^{21}$  is halogen, C<sub>4</sub>-C<sub>8</sub> trialkylsilylalkyl, CN, NO<sub>2</sub>, -OR<sup>22</sup>, -NR<sup>23</sup>R<sup>24</sup>, -S(O)<sub>n</sub>R<sup>22</sup>, -S(O)<sub>n</sub>NR<sup>23</sup>R<sup>24</sup>, -C(O)R<sup>22</sup>, -C(S)R<sup>22</sup>, -C(O)OR<sup>22</sup>, -C(S)OR<sup>22</sup>, -C(S)SR<sup>22</sup>, -C(O)NR<sup>23</sup>R<sup>24</sup>, -C(S)NR<sup>23</sup>R<sup>24</sup>, -CHR<sup>25</sup>COR<sup>22</sup>, -CHR<sup>25</sup>P(O)(OR<sup>22</sup>)<sub>2</sub>, -CHR<sup>25</sup>P(S)(OR<sup>22</sup>)<sub>2</sub>, -CHR<sup>25</sup>C(O)NR<sup>23</sup>R<sup>24</sup>, -CHR<sup>25</sup>C(O)NH<sub>2</sub>, -CHR<sup>25</sup>CO<sub>2</sub>R<sup>22</sup>, phenyl optionally substituted with one or more R<sup>26</sup> groups or benzyl optionally substituted with one or more R<sup>26</sup> groups;
- 30 each  $R^{22}$  is C<sub>1</sub>-C<sub>8</sub> alkyl, C<sub>3</sub>-C<sub>8</sub> cycloalkyl, C<sub>3</sub>-C<sub>8</sub> alkenyl, C<sub>3</sub>-C<sub>8</sub> alkynyl, C<sub>1</sub>-C<sub>8</sub> haloalkyl, C<sub>2</sub>-C<sub>8</sub> alkoxyalkyl, C<sub>2</sub>-C<sub>8</sub> alkylthioalkyl, C<sub>2</sub>-C<sub>8</sub> alkylsulfinylalkyl, C<sub>2</sub>-C<sub>8</sub> alkylsulfonylalkyl, C<sub>4</sub>-C<sub>8</sub> alkoxyalkoxyalkyl, C<sub>4</sub>-C<sub>8</sub> cycloalkylalkyl, C<sub>4</sub>-C<sub>8</sub> alkenoxyalkyl, C<sub>4</sub>-C<sub>8</sub> alkynyloxyalkyl, C<sub>6</sub>-C<sub>8</sub> cycloalkoxyalkyl, C<sub>4</sub>-C<sub>8</sub> alkenyloxyalkyl, C<sub>4</sub>-C<sub>8</sub> alkynyloxyalkyl, C<sub>3</sub>-C<sub>8</sub> haloalkoxyalkyl, C<sub>4</sub>-C<sub>8</sub> haloalkenoxoalkyl, C<sub>4</sub>-C<sub>8</sub> haloalkynyloxyalkyl, C<sub>6</sub>-C<sub>8</sub> cycloalkylthioalkyl,
- 35

- C<sub>4</sub>-C<sub>8</sub> alkenylthioalkyl, C<sub>4</sub>-C<sub>8</sub> alkynylthioalkyl, C<sub>1</sub>-C<sub>4</sub> alkyl substituted with phenoxy or benzyloxy, each ring optionally substituted with halogen, C<sub>1</sub>-C<sub>3</sub> alkyl or C<sub>1</sub>-C<sub>3</sub> haloalkyl, C<sub>4</sub>-C<sub>8</sub> trialkylsilylalkyl, C<sub>3</sub>-C<sub>8</sub> cyanoalkyl, C<sub>3</sub>-C<sub>8</sub> halocycloalkyl, C<sub>3</sub>-C<sub>8</sub> haloalkenyl, C<sub>5</sub>-C<sub>8</sub> alkoxyalkenyl, C<sub>5</sub>-C<sub>8</sub> haloalkoxyalkenyl, C<sub>5</sub>-C<sub>8</sub> alkylthioalkenyl, C<sub>3</sub>-C<sub>8</sub> haloalkynyl, C<sub>5</sub>-C<sub>8</sub> alkoxyalkynyl, C<sub>5</sub>-C<sub>8</sub> haloalkoxyalkynyl, C<sub>5</sub>-C<sub>8</sub> alkylthioalkynyl, C<sub>2</sub>-C<sub>8</sub> alkyl carbonyl, C<sub>2</sub>-C<sub>8</sub> alkoxy carbonyl, phenyl optionally substituted with halogen, CN, C<sub>1</sub>-C<sub>2</sub> haloalkyl and C<sub>1</sub>-C<sub>2</sub> haloalkoxy or benzyl optionally substituted with halogen, C<sub>1</sub>-C<sub>3</sub> alkyl and C<sub>1</sub>-C<sub>3</sub> haloalkyl;
- each R<sup>23</sup> is H or C<sub>1</sub>-C<sub>4</sub> alkyl;
- each R<sup>24</sup> is C<sub>1</sub>-C<sub>4</sub> alkyl or phenyl optionally substituted with one or more R<sup>26</sup> groups;
- R<sup>23</sup> and R<sup>24</sup> may be taken together as -(CH<sub>2</sub>)<sub>5</sub>-, -(CH<sub>2</sub>)<sub>4</sub>- or -CH<sub>2</sub>CH<sub>2</sub>OCH<sub>2</sub>CH<sub>2</sub>-,
- each ring optionally substituted with C<sub>1</sub>-C<sub>3</sub> alkyl, phenyl or benzyl;
- each R<sup>25</sup> is H or C<sub>1</sub>-C<sub>4</sub> alkyl;
- each R<sup>26</sup> is C<sub>1</sub>-C<sub>3</sub> alkyl, C<sub>1</sub>-C<sub>3</sub> haloalkyl, C<sub>1</sub>-C<sub>3</sub> alkoxy, C<sub>1</sub>-C<sub>3</sub> haloalkoxy, C<sub>1</sub>-C<sub>3</sub> alkylthio, C<sub>2</sub>-C<sub>5</sub> alkylcarbonyl, C<sub>2</sub>-C<sub>5</sub> alkoxy carbonyl, halogen, amino, cyano or nitro;
- R<sup>28</sup> is H or C<sub>1</sub>-C<sub>4</sub> alkyl;
- X<sup>1</sup> and X<sup>2</sup> are independently O or S;
- X<sup>3</sup> is O, S or NR<sup>28</sup>;
- m is 0, 1, 2, 3 or 4;
- each n is independently 0, 1 or 2;
- p is 0 or 1;
- each q is independently 0, 1 or 2; and
- t is 0, 1 or 2;
- provided that when Q is unsubstituted phenyl, X<sup>1</sup>, X<sup>2</sup> and X<sup>3</sup> are O, q is 0 and R<sup>2</sup> is methyl, then R<sup>1</sup> is other than methyl.

2. The compound of Claim 1 wherein
- Q is H; or C<sub>1</sub>-C<sub>12</sub> alkyl, C<sub>3</sub>-C<sub>10</sub> cycloalkyl, C<sub>6</sub>-C<sub>14</sub> bicycloalkyl, C<sub>3</sub>-C<sub>12</sub> alkenyl, C<sub>3</sub>-C<sub>10</sub> cycloalkenyl, C<sub>6</sub>-C<sub>14</sub> bicycloalkenyl or C<sub>3</sub>-C<sub>12</sub> alkynyl, each optionally substituted with one or more R<sup>21</sup>; or
- Q is a 3- to 7-membered fully saturated or 5- to 7-membered partially saturated heterocyclic ring containing one or two X, provided that (a) when X is other than O or S(O)<sub>n</sub>, then only one X may be present and (b) when two X are present in the ring, they cannot be bonded directly to each other; or

Q is a 5- or 6-membered aromatic heterocyclic ring system containing 1 to 3 heteroatoms independently selected from the group consisting of nitrogen, oxygen and sulfur, provided that the heterocyclic ring system contains no more than one oxygen and no more than one sulfur, and each heterocyclic ring system is optionally substituted with one or more R<sup>16</sup>; and when Q is a 5- or 6-membered aromatic heterocyclic ring system containing a nitrogen, then Q is bonded through any available carbon or nitrogen atom by replacement of a hydrogen on said carbon or nitrogen atom; or

Q is phenyl optionally substituted with one or more substituents independently selected from the group consisting of R<sup>16</sup>, phenoxy and Z.

3. The compound of Claim 2 wherein

Q is H; or C<sub>1</sub>-C<sub>12</sub> alkyl, C<sub>3</sub>-C<sub>10</sub> cycloalkyl, C<sub>6</sub>-C<sub>14</sub> bicycloalkyl, C<sub>3</sub>-C<sub>12</sub> alkenyl, C<sub>3</sub>-C<sub>10</sub> cycloalkenyl, C<sub>6</sub>-C<sub>14</sub> bicycloalkenyl or C<sub>3</sub>-C<sub>12</sub> alkynyl, each optionally substituted with one or more R<sup>21</sup>.

4. The compound of Claim 2 wherein

Q is a 3- to 7-membered fully saturated or 5- to 7-membered partially saturated heterocyclic ring containing one or two X, provided that (a) when X is other than O or S(O)<sub>n</sub>, then only one X may be present and (b) when two X are present in the ring, they cannot be bonded directly to each other; or

Q is a 5- or 6-membered aromatic heterocyclic ring system containing 1 to 3 heteroatoms independently selected from the group consisting of nitrogen, oxygen and sulfur, provided that the heterocyclic ring system contains no more than one oxygen and no more than one sulfur, and each heterocyclic ring system is optionally substituted with one or more R<sup>16</sup>; and when Q is a 5- or 6-membered aromatic heterocyclic ring system containing a nitrogen, then Q is bonded through any available carbon or nitrogen atom by replacement of a hydrogen on said carbon or nitrogen atom.

5. The compound of Claim 2 wherein

Q is phenyl optionally substituted with one or more substituents independently selected from the group consisting of R<sup>16</sup>, phenoxy and Z.

6. The compound of Claim 3 wherein

Q is C<sub>1</sub>-C<sub>6</sub> alkyl optionally substituted with one or more R<sup>21</sup>, C<sub>3</sub>-C<sub>7</sub> cycloalkyl, C<sub>3</sub>-C<sub>7</sub> alkenyl or C<sub>3</sub>-C<sub>6</sub> alkynyl.

7. The compound of Claim 4 wherein

5 Q is a 5- or 6-membered aromatic heterocyclic ring system containing 1 to 3 heteroatoms independently selected from the group consisting of nitrogen, oxygen and sulfur, provided that the heterocyclic ring system contains no more than one oxygen and no more than one sulfur, and each heterocyclic ring system is optionally substituted with one or more R<sup>16</sup>; and when Q is a 5- or 6-  
10 membered aromatic heterocyclic ring system containing a nitrogen, then Q is bonded through any available carbon or nitrogen atom by replacement of a hydrogen on said carbon or nitrogen atom.

8. The compound of Claim 5 wherein

15 Q is phenyl optionally substituted with one or more substituents independently selected from the group consisting of R<sup>16</sup>.

9. The compounds of Claim 3, Claim 4 or Claim 5 wherein X<sup>1</sup>, X<sup>2</sup> and X<sup>3</sup> are O.

20 10. The compound of Claim 8 wherein

Q is phenyl with substituents on the 2-, and 6-position independently selected from the group consisting of R<sup>16</sup>.

11. The compound of Claim 6 wherein q is 0 or 1.

25

12. The compound of Claim 7 wherein q is 0 or 1.

13. The compound of Claim 8 wherein q is 0 or 1.

30 14. The compound of Claim 1 wherein

R<sup>1</sup> is phenyl substituted with one or more R<sup>13</sup>.

15. The compound of Claim 1 wherein

R<sup>2</sup> is C<sub>2</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> haloalkyl or C<sub>2</sub>-C<sub>6</sub> alkoxyalkyl.

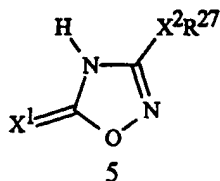
35

16. The compound of Claim 1 which is selected from the group consisting of:

379

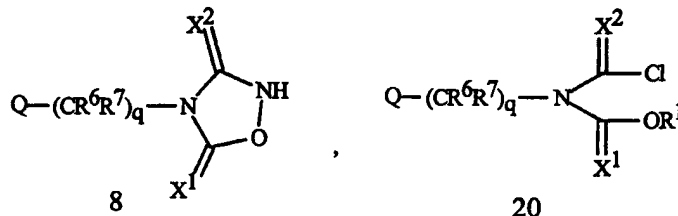
- (a) *N*-(4-fluorophenyl)-*N*-(1-methylethyl)-4-(2-methylphenyl)-3,5-dioxo-1,2,4-oxadiazolidine-2-carboxamide;
- (b) 4-(2,6-dimethylphenyl)-*N*-(4-fluorophenyl)-*N*-(1-methylethyl)-3,5-dioxo-1,2,4-oxadiazolidine-2-carboxamide;
- 5 (c) 4-(2,6-dimethylphenyl)-*N*-(1-methylethyl)-3,5-dioxo-*N*-phenyl-1,2,4-oxadiazolidine-2-carboxamide;
- (d) 4-cyclohexyl-*N*-(1-methylethyl)-3,5-dioxo-*N*-phenyl-1,2,4-oxadiazolidine-2-carboxamide;
- (e) 4-cyclohexyl-*N*-(4-fluorophenyl)-*N*-(1-methylethyl)-3,5-dioxo-1,2,4-oxadiazolidine-2-carboxamide;
- 10 (f) *N*,4-bis(1-methylethyl)-3,5-dioxo-*N*-phenyl-1,2,4-oxadiazolidine-2-carboxamide;
- (g) *N*-(4-fluorophenyl)-*N*-(1-methylethyl)-3,5-dioxo-4-(cyclopropyl)-1,2,4-oxadiazolidine-2-carboxamide; and
- 15 (h) *N*-(4-fluorophenyl)-*N*,4-bis(1-methylethyl)-3,5-dioxo-1,2,4-oxadiazolidine-carboxamide.

17. A compound of Formula 5



- 20 wherein  $R^{27}$  is  $-(CR^6R^7)_q-Q$ ;  $R^6$ ,  $R^7$ ,  $q$ ,  $Q$ ,  $X^1$  and  $X^2$  are as defined above for Formula 1; provided that when  $X^1$  and  $X^2$  are O and  $q$  is 0, then  $Q$  is other than unsubstituted benzyl.

18. A compound of Formula 8 or Formula 20



25

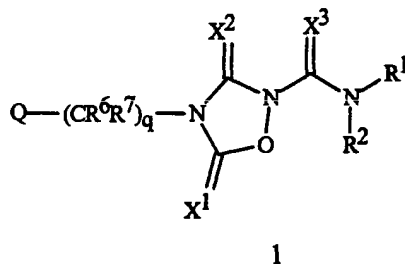
wherein  $R^6$ ,  $R^7$ ,  $q$ ,  $Q$  and  $X^2$  are as defined above for Formula 1; and  $X^1$  is O;



380

provided that when  $X^1$  and  $X^2$  are O and  $q$  is 0, then  $Q$  is other than unsubstituted benzyl.

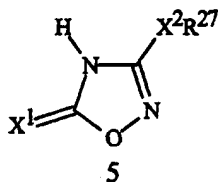
19. A process for preparing a compound of Formula 1



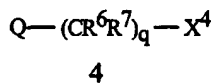
5

wherein  $Q$ ,  $R^6$ ,  $R^7$ ,  $q$ ,  $X^1$ ,  $X^2$ ,  $X^3$ ,  $R^1$  and  $R^2$  are as defined for Formula 1 in Claim 1, comprising:

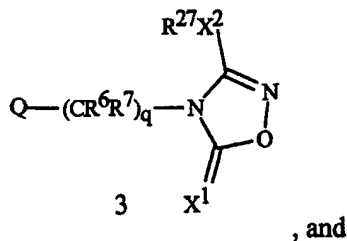
(a) contacting a compound of Formula 5



10 wherein  $R^{27}$  is  $-(CR^6R^7)_q-Q$ , with a compound of Formula 4

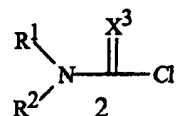


wherein  $X^4$  is halogen or mesylate, in the presence of a base to provide a compound of Formula 3

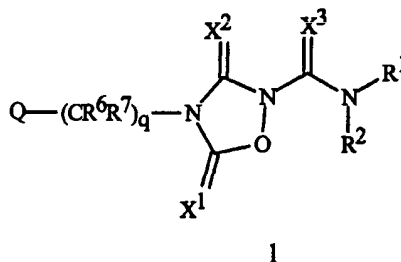


15 (b) contacting the compound of Formula 3 with a carbamoyl or thiocarbamoyl chloride of Formula 2

381

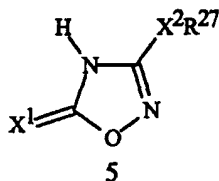


20. A process for preparing a compound of Formula 1

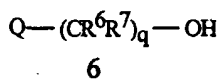


5 wherein Q, R<sup>6</sup>, R<sup>7</sup>, q, X<sup>1</sup>, X<sup>2</sup>, X<sup>3</sup>, R<sup>1</sup> and R<sup>2</sup> are as defined for Formula 1 in Claim 1, comprising:

(a) contacting a compound of Formula 5

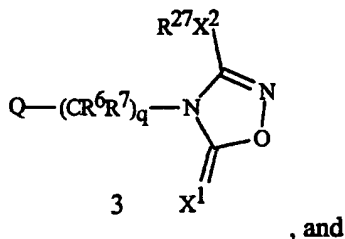


wherein R<sup>27</sup> is -(CR<sup>6</sup>R<sup>7</sup>)<sub>q</sub>-Q, with an alcohol of Formula 6



10

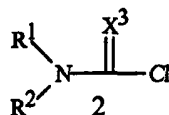
under reaction conditions involving a tertiary phosphine and an azo compound to provide a compound of Formula 3



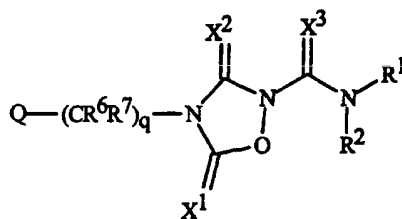
, and

15 (b) contacting the compound of Formula 3 with a carbamoyl or thiocarbamoyl chloride of Formula 2

382

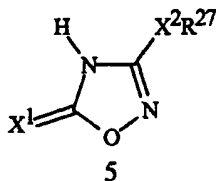


21. A process for preparing a compound of Formula 1

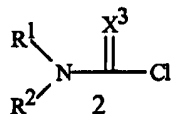


wherein Q, R<sup>6</sup>, R<sup>7</sup>, q, X<sup>1</sup>, X<sup>2</sup>, X<sup>3</sup>, R<sup>1</sup> and R<sup>2</sup> are as defined for Formula 1 in Claim 1,  
5 comprising:

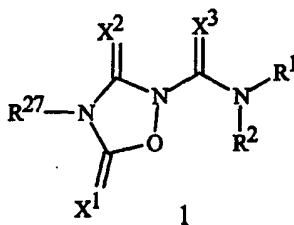
(a) contacting a compound of Formula 5



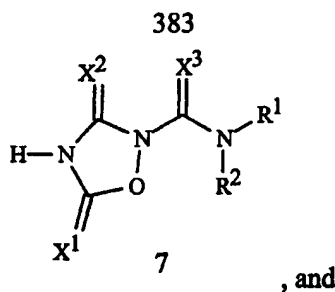
wherein R<sup>27</sup> is -(CR<sup>6</sup>R<sup>7</sup>)<sub>q</sub>-Q, with a carbamoyl or thiocarbamoyl chloride of Formula 2



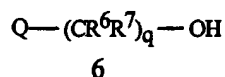
10 in the presence of a base to provide the compound of Formula 1



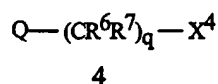
directly or a compound of Formula 7



(b) contacting the compound of Formula 7 with an alcohol of Formula 6



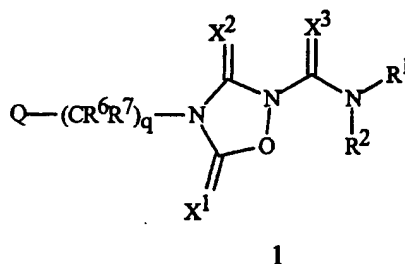
5 under reaction conditions involving a tertiary phosphine and an azo compound or with a compound of Formula 4



in the presence of a base.

10

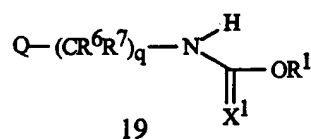
22. A process for preparing a compound of Formula 1



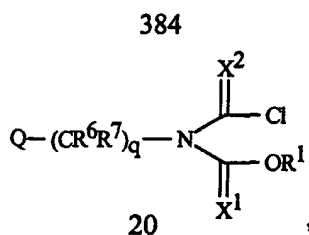
wherein Q, R<sup>6</sup>, R<sup>7</sup>, q, X<sup>2</sup>, X<sup>3</sup>, R<sup>1</sup> and R<sup>2</sup> are as defined for Formula 1 in Claim 1, and X<sup>1</sup> is O, comprising:

15

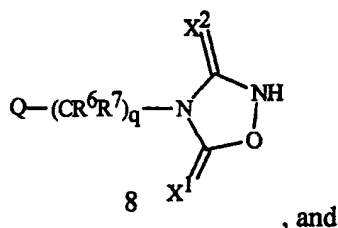
(a) contacting a compound of Formula 19



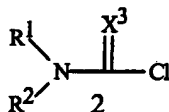
with phosgene or thiophosgene to provide a compound of Formula 20



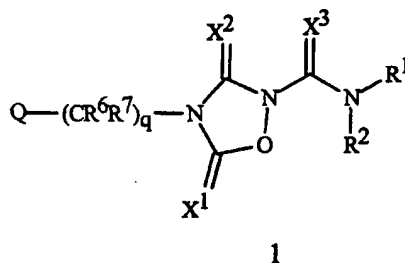
(b) contacting the compound of Formula 20 with hydroxylamine, following by treatment with a base, and then an acid, to provide a compound of Formula 8



5 (c) contacting the compound of Formula 8 with a compound of Formula 2

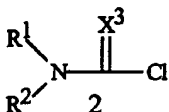


23. A process for preparing a compound of Formula 1

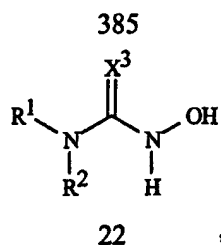


10 wherein Q, R<sup>6</sup>, R<sup>7</sup>, q, X<sup>1</sup>, X<sup>2</sup>, X<sup>3</sup>, R<sup>1</sup> and R<sup>2</sup> are as defined for Formula 1 in Claim 1, comprising:

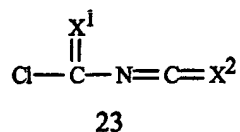
(a) contacting a compound of Formula 2



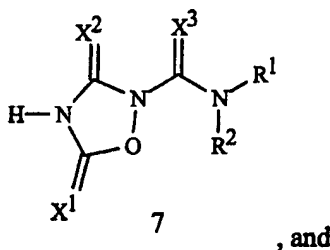
with hydroxylamine in the presence of a base to provide a compound of Formula 22



(b) contacting the compound of Formula 22 with a compound of Formula 23



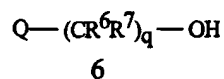
in the presence of a base to provide a compound of Formula 7



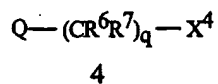
5

, and

(c) contacting the compound of Formula 7 with an alcohol of Formula 6

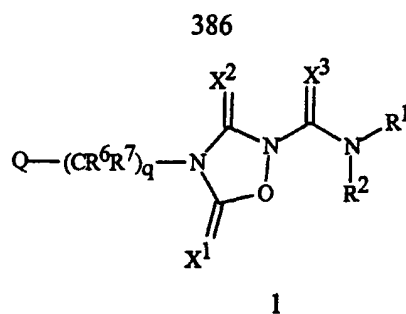


under reaction conditions involving a tertiary phosphine and an azo compound or with a  
10 compound of Formula 4

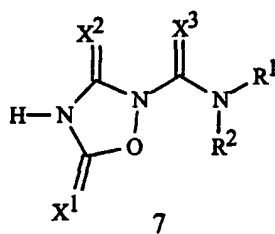


in the presence of a base.

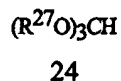
24. A process for preparing a compound of Formula 1



wherein Q, R<sup>6</sup>, R<sup>7</sup>, q, X<sup>1</sup>, X<sup>2</sup>, X<sup>3</sup>, R<sup>1</sup> and R<sup>2</sup> are as defined for Formula 1 in Claim 1, comprising contacting a compound of Formula 7

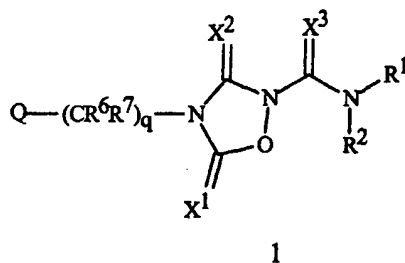


5 with an orthoformate of Formula 24



wherein R<sup>27</sup> is -(CR<sup>6</sup>R<sup>7</sup>)<sub>q</sub>-Q, in the presence of a base.

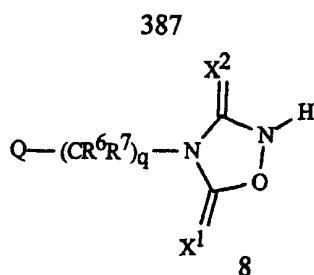
25. A process for preparing a compound of Formula 1



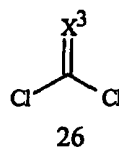
10

wherein Q, R<sup>6</sup>, R<sup>7</sup>, q, X<sup>1</sup>, X<sup>2</sup>, X<sup>3</sup>, R<sup>1</sup> and R<sup>2</sup> are as defined for Formula 1 in Claim 1, comprising:

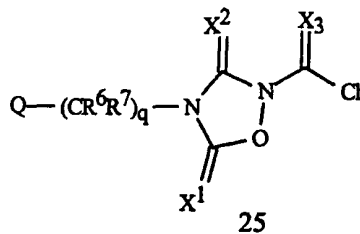
(a) contacting a compound of Formula 8



with a compound of Formula 26

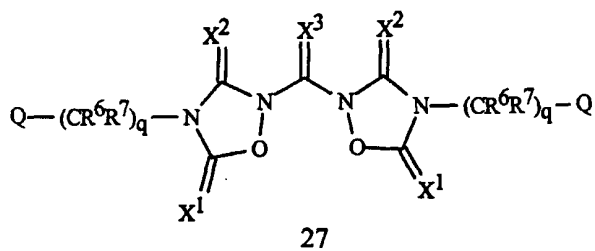


to provide a compound of Formula 25



5

or a compound of Formula 27

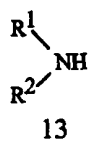


in the presence of a catalyst such as hexamethylguanidinium chloride; and

(c) contacting the compound of Formula 25 or Formula 27 with an amine of Formula

10

13



in the presence of a base.



26. A herbicidal composition comprising a herbicidally effective amount of a compound of Claim 1 and at least one of a surfactant, a solid diluent or a liquid diluent.

5 27. A method for controlling the growth of undesired vegetation comprising contacting the vegetation or its environment with a herbicidally effective amount of a compound of Claim 1.